

**REMARKS**

Presently, claims 82-90 are pending in the application. Claims 46, 48-52, 54-60, 62-65 and 67-81 have been canceled. New claims 82-90 have been added to more clearly claim and particularly point out the present invention. Support for the features of new independent claim 82 may be found, for example, in canceled claim 46, and at page 9, line 26-page 10, line 30; page 20, line 28-page 21, line 13; and page 23, line 30-page 24, line 15 of the specification. Support for the features of new dependent claims 83-90 may be found, for example, in the canceled dependent claims. Accordingly, no new matter has been added to the application by the foregoing amendments.

***Claim Rejection – § 103(e)***

The Examiner has rejected claim 73 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,177,931 to Alexander *et al.* (“Alexander”).

Although not necessarily agreeing with the Examiner, claim 73 has been canceled. Accordingly, the Examiner’s §102(e) rejection over Alexander is moot. Reconsideration and withdrawal of the Examiner’s § 102(e) rejection of claim 73 are respectfully requested.

***Claim Rejection – § 103(a)***

The Examiner has rejected claims 46, 48-52, 54-60, 62-65, 67-72 and 74-81 under 35 U.S.C. §103(a) as being unpatentable over Alexander in view of U.S. Patent No. 6,236,978 to Tuzhilin (“Tuzhilin”). The Examiner contends that Alexander teaches all features of the present invention with the exception of applying *heuristic* rules to subscriber interactions. The Examiner further contends that Tuzhilin teaches the use of heuristic rules, and concludes that it would have been obvious to utilize Tuzhilin’s heuristic rules in Alexander’s systems to achieve Applicants’ invention.

Although not necessarily agreeing with the Examiner, claims 46, 48-52, 54-60, 62-65, 67-72 and 74-81 have been canceled. Accordingly, the Examiner’s §103(a) rejection over Alexander in view of Tuzhilin is moot. However, to the extent that this

rejection is applied to any of the presently pending claims, Applicants respectfully traverse this rejection.

Alexander teaches improvements to electronic program guides (“EPGs”), including viewer interaction capabilities, opportunities for advertisers to reach viewers and creating of viewer profiles. Alexander’s system allows the viewer to interact with the EPG, including selecting programming (including advertisements) for viewing and/or recording. The user may also interact with the EPG by scrolling through the listings which are not displayed on the initial screen. The EPG in Alexander collects information about the viewer, either by obtaining the requested information directly from viewer input or learning the desired information by recording the viewer’s “actions and circumstances surrounding those actions” with the EPG (see column 28, lines 30-59 of Alexander). The information that the EPG records includes instructions provided to the EPG (e.g., a channel change) as well as the time that that change was instructed and the programming switched to and from as a result of the change. The EPG also records the absence of user interaction. Alexander teaches that a “viewer profile analysis program” performs an analysis of the collected data and, combined with the viewer’s profile information, develops “viewer characteristics”. Alexander then uses the viewer characteristics to customize the EPG, so that the viewer is presented with programming and/or advertisements that are likely to be of interest, both in terms of content and order of display. Alexander also teaches that the EPG may display advertisements based on specific programming that the viewer is currently watching or that certain advertisements may be assigned to particular “classes” of programming.

Tuzhilin teaches the generation of dynamic user profiles for use in marketing applications. A user’s dynamic profile consists of rules that characterize a user’s behavior based on a set of transactions pertaining to that user. In Tuzhilin, the dynamic profiles for various users are compressed and transformed into aggregate rules, which are then manually examined by a human expert. The human expert selects some of the aggregated rules by determining which rules the expert believes are pertinent for that user. The aggregated rules that correspond to the rules selected by the human expert are retained in an individual user’s profile. The dynamic profile is later combined with a static profile for the same user to create a single user profile. Tuzhilin teaches that the

dynamic profile rules may be created and subsequently compressed using “fuzzy rules” generally known in the art. Based on the user’s combined profile, Tuzhilin’s system makes predictions about a user’s future purchasing needs.

Independent claim 82 recites:

A computer-implemented method of including a subscriber in a group based on subscriber interaction with targeted programming, the method comprising:

- (a) monitoring subscriber interactions with the targeted programming;
- (b) retrieving information associated with the targeted programming, wherein the information describes at least one demographic characteristic of at least one group associated with the targeted programming;
- (c) retrieving heuristic rules associated with the subscriber interactions, wherein the heuristic rules infer at least one subscriber demographic based on the subscriber interactions;
- (d) correlating the at least one subscriber demographic with the at least one demographic of the group; and
- (e) associating the subscriber with the group if there is a sufficient correlation between the at least one subscriber demographic and the at least one demographic characteristic of the group.

Alexander does not teach or suggest correlating a subscriber demographic with a demographic of a group such that the subscriber may be associated with that group if a sufficient correlation exists. In Alexander, individual programming or advertisements may be assigned to “classes” or “themes” based on their common attributes and/or their common relationship to potential viewers. Alexander also teaches that an EPG may be customized such that programming associated with a particular “theme” is presented if a viewer is more apt to view programming or advertisements within that theme. However, Alexander does not teach or suggest correlating a subscriber demographic with “the at least one demographic of the group.” Not only does Alexander not assign or associate a subscriber to any particular group, as recited in claim 82, but any relationship that

a subscriber has with a theme in Alexander is determined based solely on a subscriber's previous interactions with that theme. Stated differently, in Alexander, if a subscriber views programming that is part of a particular theme, Alexander's EPG will present other programming from the same theme. In contrast, in Applicants' invention of claim 82, the subscriber is associated with a group by correlating a heuristically determined subscriber demographic with a demographic of a group. In claim 82, the group association is not determined based on whether the subscriber previously viewed or selected that group, but rather based on the subscriber's interactions with targeted programming generally, a heuristically determined inference about the subscriber, and a sufficiently high correlation of that inference with an attribute of the particular group being examined. Additionally, as the Examiner acknowledges, Alexander also does not teach or suggest the use of heuristic rules. Thus, Alexander does not teach or suggest heuristic rules that "infer at least one subscriber demographic based on the subscriber interactions," as recited in claim 82. Accordingly, Alexander does not teach or suggest all of the features of independent claim 82.

Tuzhilin also does not teach or suggest "correlating the at least one subscriber demographic with the at least one demographic of the group and associating the subscriber with the group if there is a sufficient correlation..." In Tuzhilin, there is no teaching or suggestion of associating a subscriber with a group for targeted programming, nor is there a teaching of correlating a demographic of the subscriber with a demographic of such a group. Moreover, Applicants respectfully, but strenuously, disagree with the Examiner's assertion that that Tuzhilin teaches "retrieving heuristic rules" that "infer at least one subscriber demographic based on the subscriber interactions." First, Applicants respectfully point out that in no place does Tuzhilin discuss "heuristic" rules. Applicants' acknowledge that Tuzhilin utilizes "fuzzy logic" to help determine a user's dynamic profile. However, Tuzhilin's discussion of fuzzy logic does not teach or suggest "heuristic rules". Furthermore, Tuzhilin does not teach that the

“rules” infer a demographic characteristic about the user. Rather, Tuzhilin’s rules draw direct conclusions from the application of the rules.

Additionally, Tuzhilin teaches the development of rules on a user-by-user basis. That is, in Tuzhilin, a user’s dynamic profile consists of rules – not inferred characteristics about the user. In Tuzhilin invention is directed to a method by which the rules themselves evolve to result in a better dynamic profile (which is made up of the rules). Stated differently, Tuzhilin teaches how to determine better rules (column 3, lines 58-66 of Tuzhilin). Thus, Tuzhilin does not teach or suggest “retrieving heuristic rules associated with subscriber interactions...,” since Tuzhilin derives the rules. In claim 82, the heuristic rules already exist and are not being developed or learned about. Moreover, Tuzhilin requires that a “human expert must decide which dynamic rules should be stored and which dynamic rules should be discarded” (see column 4, lines 47-50 of Tuzhilin). Such a teaching reinforces the notion that Tuzhilin’s invention does not retrieve existing heuristic rules. Additionally, the use of a human expert renders Tuzhilin’s invention as being not “computer-implemented”. Accordingly, Tuzhilin does not teach all of the features of independent claim 82.

Since neither Alexander nor Tuzhilin individually teaches or suggests all of the elements recited in independent claim 82, Applicants respectfully submit that, even if Alexander and Tuzhilin are properly combinable, such a combination would still not teach or suggest the invention of claim 82. This is because such a combination would still not teach or suggest “retrieving heuristic rules... correlating the at least one subscriber demographic with the at least one demographic of the group; and associating the subscriber with the group if there is a sufficient correlation...” Accordingly, new independent claim 82 is believed to be allowable over the combination of Alexander and Tuzhilin.

Dependent claims 83-90 are allowable at least by their dependency on independent claim 82. Reconsideration and withdrawal of the Examiner's §103(a) rejection of claims 46, 48-52, 54-60, 62-65, 67-72 and 74-81 are respectfully requested.

***Conclusion***

In view of the foregoing amendments and remarks, Applicants respectfully submit that the Examiner's rejections have been overcome, and that the application, including claims 82-90, is in condition for allowance. Reconsideration and withdrawal of the Examiner's rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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